

Project partners


 UFZ - Helmholtz Centre for Environmental Research, Germany

 Agricultural University, Plovdiv, Bulgaria

 Babeş-Bolyai University, Romania

 Butterfly Conservation Europe, The Netherlands

 Fundatia ADEPT Transilvania, Romania

 Institute of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences, Bulgaria


 Institute of Environmental Sciences and Technology - ICTA, Autonomous University of Barcelona, Spain


 Landratsamt Mittelsachsen, Germany

 Lund University, Sweden

 Pensoft Publishers, Bulgaria

 Sapientia University, Romania

 Saxon State Office for Environment, Agriculture and Geology, Germany

 Swedish University of Agricultural Sciences - SLU, Sweden

 Swiss Federal Research Institute - WSL, Switzerland

 STACCATO

Keywords

agronomy, economy, valuation, crop production, pollination, biocontrol, nutrient cycling, soil fauna, landscape ecology, global change, landscape structure

Consortium

10 partners from 6 European countries (and 4 subcontracted partners from 4 European countries)

Structure

Structured into 8 Work packages

Duration

2015 - 2018

Website

<http://staccato-project.net>

Project coordinator

Prof. Dr. Josef Settele, Helmholtz Centre for Environmental Research - UFZ

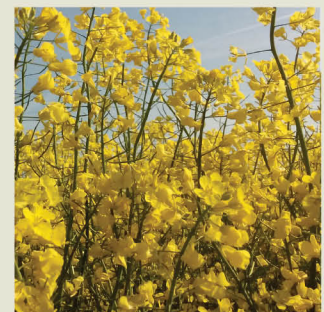
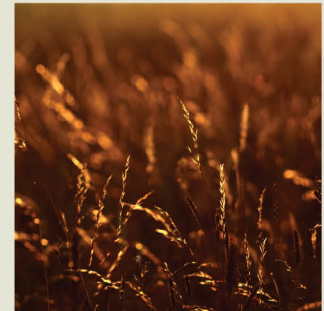
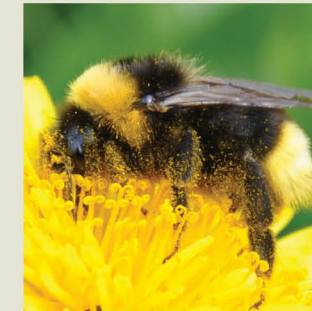
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 STACCATO

SUSTAINING AGRICULTURAL CHANGE
THROUGH ECOLOGICAL ENGINEERING
AND OPTIMAL USE OF NATURAL
RESOURCES



www.staccato-project.net

Background

The primary mission of the BiodivERsA project “STACCATO” is to advance the long-term sustainable development of land use systems against risks of global change. The research initiative aims at quantifying the sensitivity of ecosystem functions (ESF) and their subsequent ecosystem services (ESS) to environmental pressures in representative agriculturally dominated landscapes in Europe.

The starting point of STACCATO is based on the Millennium Ecosystem Assessment (MEA). A subset of ecosystem functions and services was selected according to their relevance for the targeted land use systems:

- Provisioning Services (PS): Primary Production, Crop Production, Nutrient Status
- Regulating Services (RS): Species Interactions, Biocontrol of Crop Pests, Crop Pollination



Photo: Anja Schmidt



Photo: Anja Schmidt



Photo: Beatriz Rodríguez-Labjos



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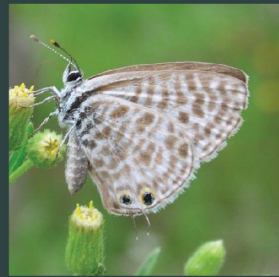


Photo: Erik Öckinger



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- Cultural Services (CS): Aesthetics/Beauty, Recreation, Cultural Identity

To analyse and evaluate their impending development, STACCATO will interlink these ecosystem functions and services with the most relevant influencing pressures and their changes over time:

- Land Use Intensity
- Biodiversity Loss
- Climate Change
- Socio-Economic Development

STACCATO research will be largely based on input from and exchange with the relevant stakeholders.

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STACCATO will

- Investigate interactions between crop production areas and landscapes in which they are embedded along a geographical gradient of a European field site network.
- Provide quantification of current and future dependencies of ESS in cropping systems on a) local and regional land use intensity and its driving forces, b) biodiversity and c) climate.
- Study three ESS strands: a) nutrient status and crop production, b) crop related biocontrol and pollination, and c) cultural services and how they are affected by land use intensity.
- Develop valuations of the investigated ESF/ESS strands through monetary as well as non-monetary methods.
- Test and further improve existing and new indicators for ESS and develop an indicator based assessment of risks and opportunities in crop cultivation.
- Co-design project activities in close interaction with stakeholders.
- Develop guidelines for decision makers (incl. farmers) to enhance ESS provision, in particular through eco-functional intensification by ecological engineering, including conventional, integrated and organic agriculture.
- Develop analytical socio-economic frameworks and tools for promotion of advanced land management practices.